Powai, India

Project Focus: Kirana Stores

Record Keeping
Day register

<table>
<thead>
<tr>
<th>Main Register</th>
<th>Problem: Multiple and Cryptic Record Keeping</th>
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<tbody>
<tr>
<td></td>
<td>Nai-Hwa Chiang</td>
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<table>
<thead>
<tr>
<th>Buyer name</th>
<th>Buyer address</th>
<th>Buyer number</th>
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| Items and total |
|-----------------|-----------------|
Heavily credit based buying and informal payback systems lead to inconsistency in sales records of both grocer and buyer.
Record keeping practices are meticulous but encoded and highly informal; thereby limiting financing options for the shopkeeper.
Mobile based application allows for the shop keeper to keep his records in order and facilitates greater access to finance from banks etc.
Sanjay Seith

oooxx street....

Time frame: 1 week
Results: Still Pending

Validation: Prototype and Scenario
Using design to foster social networks in slums of Powai

[IPRO 305] PRODUCT WORKSHOP

Spring 2008, IIT Chicago

Gauri Verma, Valerie Campbell, Edwin Steinmetz, Vishwesh Kelkar
THE BALWADI: tailoring and screen printing business
**Strengths:**
- Manageable scale
- Sharing space
- Combination of women and children
- Strong social bonds

**Weaknesses:**
- Money doesn’t flow between the two
- Dependent on external funding
- Limited in scale.
- Limited profitably
- Does not support learning new skills
PROPOSED STRUCTURE: For profit and not for profit hybrid with an incubator for learning experience

Maintains:
- Manageable scale
- Combination of women and children
- Strong social bonds

Added Benefits:
- Self-sufficient
- Scaleable and repeatable
- Shared space and resources
- Supports sharing and learning new skills
RELATIONSHIP: Between the Incubator and the Balwadi

Learning by teaching + Learning by participation

Trainees get experience in teaching / helping in the Balwadi

Kids learn by making and participating +

Both imbibe the core values of the organization from the start
RELATIONSHIP: Between the Incubator and the For profit enterprise

Learning by teaching
+
Learning by participation

Trainees get experience by helping in the for profit business
+
Experts train and teach the others in order to become independent
Channelizing profits
+
Channelizing expertise
back into the organization

A percentage of profits from the For profit has to go to the Balwadi

Knowledge and products made by the For profit can be utilized in the Balwadi
RELATIONSHIP: Between the For profit enterprise and the satellite workers

Rewarding expertise
+ Encouraging self reliance
+ Collaboration

Once a member has reached a level of expertise he can choose to:

Work from home /
Join any part of the organization/
Take his share and split with others to form a new Balwadi
POTENTIAL CLIENTS - CUSTOMERS - PARTNERS - ALLIES

RETAILERS
Crafts, apparel, home furnishing, accessories

CORPORATES
( CSR Departments )
Co creation workshops

INDIVIDUALS
Customized products

ENGG. / INFO TECH
Expertise exchange, BOP research, technology & product development

NGO’s
( child education )
Expertise exchange, children involvement, Educational aids

SOCIAL ENTREPRENEURS
Expertise exchange, children and community involvement

OTHER BALWADIS...
NETWORK : sharing resources between balwadis

Finding your own niche and using existing expertise

- **recycled slum waste**
  - made into educational toys

- **BOP research**
  - and setting up distribution channels

- **Corporate team building workshops**
  - Annual slum fairs

- **health clinic**
  - instead of balwadi

- **custom made goods**
Home based assembly businesses in Powai
Enhance the social networking aspect of working and sharing responsibilities of women workers in slums in order to:

- Boost productivity
- Provide entertainment
- Improve health and well-being
- Increase financial gain
Existing home-based businesses
Kitty Party Model: Upper and Middle class housewives

Stay at home wives have idle time and money

Kitty Party:

- Create a network amongst themselves
- Come together at a venue
- Socialize, play games and earn money
Enhanced model for women workers in slums

Kitty Co-operative addresses all needs for women workers in slums

MASLOW’S HIERARCHY OF NEEDS

- Physiological: Health awareness camps, Walking clubs, Yoga training
- Safety: Availability of loans for emergency expenses, savings, investment plans, health insurance, social security, portfolio management.
- Love/Belonging: Social bonding, sharing of new ideas to improve productivity.
- Esteem: Independence
- Self Actualization: Learning
Recycling System in Powai
Current Ecosystem

Small scrap collectors
- Collects daily 10 to 20 kg of scrap
- Communication: By phone/mutual understanding
- Transportation: bicycle/walking

Main scrap collector
- Collects daily 100 to 200 kg of scrap
- Communication: By phone/mutual understanding

Recycling plant
- Plastic bottles other plastics: kurla
- Milk bags: kanjurmarg
- Communication: By phone
- Transportation: goods carrier
- Collects daily 500 to 1500 kg of scrap

Transportation
- Goods carrier pays half amount
Current scrap collection system

No set time schedule for collection
Current scrap collection system

Value of scrap changes
Current scrap collection system

Excess scrap builds up and wastes space
Current scrap collection system

Vendors barter with scrap
Concept Model

Alerting flag
Scrap credit
Scrap
Discount
Small scrap collector
Mobile vendor
Specialized scrap bags
Scrap compator & grinder
General store
- Market price
- Schedule
Specialized Scrap bins
Texting market price
Main scrap collector
- Market price
- Schedule
Texting market price
Van
Factory

Vasile Bora, Dan Folwaczny, Kyungsun Kim, Shilpa Rao, Amy Sprague

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Concept Model

Scrap segregation and incentive system

Alerting flag

Scrap credit

Scrap

General store
  - Market price
  - Schedule

Specialized Scrap bins

Texting market price

Discount

Scrap compator & grinder

Small scrap collector
Mobile vendor

Specialized scrap bags

Texting market price

Main scrap collector
  - Market price
  - Schedule

Bus

Factory
Product Concept:
Color Coded Bins

Please Sort Your Trash!
Glass Plastic Metal
Product Concept:
Bulletin board to display market prices of scrap
Concept Model

Alerting flag

Scrap credit

Scrap

General store
- Market price
- Schedule

Specialized Scrap bins

Texting market price

Discount

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& grinder

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Small scrap collector
Mobile vendor

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Mobile vendor networking

Product Design Workshop | Spring 2008 | Institute of Design

Vasile Bora, Dan Folvaczny, Kyungsun Kim, Shilpa Rao, Amy Sprague
Product Concept:
Can Compactor

Handle pulls down to crush aluminum cans

Tray pulls out to drop crushed cans in bin
Product Concept:
Scrap Grinder

Mechanism explanation:
Metal wheels mounted on axle and driven by the gears

Loading area

Unloading area

Bag used to store the crushed scrap

Rotating wheels mounted on two parallel axes that intertwine and crush the inserted scrap; the two sets of wheels turn in opposite directions

Top view:
Gears

Side view: